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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,252	03/09/2005	Andrew Thomas Stanley	1-16951	2854

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EXAMINER	
WIESE, NOAH S	

ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,252	STANLEY, ANDREW THOMAS	
	Examiner	Art Unit	
	NOAH S. WIESE	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

1. The claims 15-39 are pending and presented for the examination.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/GB03/03880.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 15-21, 25-34, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krinov (GB 887032).

Regarding **claim 15**, Krinov teaches a method of manufacturing glass comprising mixing a wetting agent with the batch materials along with an aqueous alkali metal salt. (see page 3, lines 25-37). Adding these two components is done to prevent the glass batch from setting and conglomerating during storage. In Krinov patent, the wetting agent is analogous with a surfactant. Krinov further teaches that the batch contains 2-20 wt% water, indicating that the batch preparation and storage method taught by Krinov is for storing moist batches.

Krinov teaches that the moist batch is stored and remains free flowing at a temperature of 90 F (32.2°C) or above. Thus, the Krinov patent does not anticipate the limitation regarding storage below 30°C. However, because the storage temperature taught is very close to the range claimed, and because Krinov specifically teaches that the preparation and storage method is for creating free-flowing batches that avoid setting, one of ordinary skill would have been motivated to investigate further storage temperatures. Room temperature (below 30°C) would have been an obvious choice for a storage temperature because of convenience and ease of testing. Thus, through routine experimentation and optimization of the Krinov method, one of ordinary skill would have arrived at a storage method using the same compositions and method, but realizing that storage could be done at lower temperatures. Therefore, the claim is obvious and not patentably distinct over the prior art of record.

Regarding **claim 16**, as discussed above, Krinov teaches that the glass batches contain 2-20 wt% water. Per MPEP 2144.05, in the case where the claimed ranges

"overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists.

Regarding **claims 17-18**, Krinov teaches that the glass batch contains soda ash, a water soluble component (see claim 5).

Regarding **claims 19-21**, Krinov teaches that the wetting agent (surfactant) can be an alkyl aryl sulphonate (see page 3, lines 25-38). This is an anion wetting agent and a soluble soap.

Regarding **claim 25**, Krinov teaches that the wetting agent (surfactant) is incorporated into the soda ash solution, which is incorporated into the glass batch as the ingredients are mixed.

Regarding **claim 26**, Krinov teaches examples wherein the glasses batches are stored for 24 and 48 hours. This would show one of ordinary skill that the batches can be stored for this length of time. As discussed above, one of ordinary skill, through routine experimentation and optimization, would have arrived at a storage temperature of below 30°C, such as room temperature.

Regarding **claims 27-28**, Krinov teaches a method of manufacturing glass comprising mixing a wetting agent with the batch materials along with an aqueous alkali metal salt (see page 3, lines 25-38). Adding these two components is done to prevent the glass batch from setting and conglomerating during storage. In Krinov patent, the wetting agent is analogous with a surfactant. Krinov further teaches that the batch contains 2-20 wt% water, indicating that the batch preparation and storage method taught by Krinov is for storing moist batches. Krinov teaches that the batches are

preheated to 110°C before melting, and that at these temperatures, the batch is free flowing (see examples I and II). It is obvious from the Krinov teaches that heating the batch to temperatures above 100°C, including 150°C, would lead to a batch that remains free flowing.

Regarding **claim 29**, as discussed above, Krinov teaches that the glass batches contain 2-20 wt% water. Per MPEP 2144.05, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists.

Regarding **claims 30-31**, Krinov teaches that the glass batch contains soda ash, a water soluble component (see claim 5).

Regarding **claims 32-34**, Krinov teaches that the wetting agent (surfactant) can be an alkyl aryl sulphonate (see page 3, lines 25-38). This is an anion wetting agent and a soluble soap.

Regarding **claim 38**, Krinov teaches that the wetting agent (surfactant) is incorporated into the soda ash solution, which is incorporated into the glass batch as the ingredients are mixed.

Regarding **claim 39**, Krinov teaches examples wherein the glasses batches are stored for 24 and 48 hours.

6. Claims 22-24 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krinov (GB 887032) in view of Barrett (US 3615811) and Anderson (US 6482517).

Regarding **claims 22 and 35**, the claims differ from Krinov because Krinov does not teach that the soap is a carboxylate having a chain length of between C4 and C22. However, the use of carboxylates as surfactants was known in the art at the time of the invention, and carboxylates were known to be equivalent to sulphonates for this purpose.

Barrett teaches a carbonate ceramic dry composition that is suitable for storage and shipment (see Abstract). In this way it is similar to the glass batch taught by Krinov. The composition includes a dispersant that can be a surfactant such as a carboxylate or sulphonate (see column 2-3, lines 62-5). While Barrett does not teach the carbon chain length of the carboxylate dispersant, suitable chain lengths for these types of dispersants were known in the art. Anderson teaches a coated particle where a surfactant (dispersant) is used that is equivalent to the type used by Barrett (see column 26, lines 12-22). Anderson teaches that the carboxylate surfactants have carbon chain lengths of C8-C20 (see column 26, lines 19-21). This shows that the suitable chain lengths for carboxylate surfactants were known in the art to fall within the range of claims 22 and 35.

The Barrett teachings show that carboxylates and sulphonates were known in the art at the time of the invention to be equivalent surfactants for incorporation into particulate mixtures such as glass batches. Therefore, because Krinov teaches the use of a sulphonate surfactant, the use of a carboxylate would simply be a matter of using an equivalent surfactant to achieve equivalent and expected results. Thus, claims 22 and 35 are obvious and not patentably distinct over the prior art of record.

Regarding **claims 23 and 36**, Krinov teaches that the sulphonates are alkyl sulphonates. This means they contain a group I counter-ion. Barrett does not specifically teach the type of carboxylate salt used as a surfactant, and thus does not explicitly teach the counter-ion included. However, carboxylates that are salts of group I elements are common, and the teaching of Krinov with regard to the group I salt would indicate to one of ordinary skill that these same counter-ions could be used with the carboxylates taught by Barrett. Therefore, the use of this specific surfactant would be obvious from the teachings of Krinov in view of Barrett, and claims 23 and 36 are obvious and not patentably distinct over the prior art of record.

Regarding **claims 24 and 37**, Barrett teaches that the dispersant is present in the carbonate batch in the amount of about 2 wt% (see claim 1). The carboxylate and sulphonate surfactants are taught by Barrett as types of dispersants possible for use.

Conclusion

7. No claim is allowed.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah S. Wiese whose telephone number is 571-270-3596. The examiner can normally be reached on Monday-Friday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry A Lorengo/
Supervisory Patent Examiner, Art Unit 1793

Noah Wiese
May 13th, 2008
AU 1793